Manitoba
Agriculture

Guidelines For Estimating
COW-CALF PRODUCTION COSTS
Based On A 100 Cow Herd

Information Update

DATE: October, 1992

This guide is designed to provide you with planning information and a format for calculating costs of production on a 100 cow-calf enterprise. The production costs included in this enterprise budget are not intended as a cost study of the beef industry in Manitoba.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time; or comparing the plan with the actual production at the end of the planning period. Fixed costs are based on estimates of new costs.

The budget may be adjusted by putting your figures in the appropriate column. Each cow-calf producer is encouraged to determine his own costs of production based on his own inputs, pasture program, and management.

MG-15396

COW-CALF PRODUCTION COSTS 1992
(BASED ON A 100 COW HERD)

		$/Cow/Year	Your Farm
A.	**OPERATING COSTS**		
1.	**Feed Costs**		
	1.01 Grain	$ 7.34	
	1.02 Hay	90.00	
	1.03 Salt & Minerals	15.52	
	Total Feed Costs	**$ 112.86**	
2.	**Other Operating Costs**		
	2.01 Straw	$ 15.00	
	2.02 Vet. Medicine & Supplies	21.84	
	2.03 Breeding Costs	14.53	
	2.04 Fuel, Mtce. & Repairs	17.50	
	2.05 Utilities	7.00	
	2.06 Marketing & Transportation	19.25	
	2.07 Death Loss	10.00	
	2.08 Manure Removal	15.00	
	2.09 Insurance	1.94	
	2.10 Herd Replacement	33.75	
	2.11 Miscellaneous	5.00	
	2.12 Stabilization Premium	6.00	
	Subtotal Operating Costs	279.67	
	2.13 Operating Interest	11.19	
TOTAL OPERATING COSTS		**$290.86**	
B.	**FIXED COSTS**		
3.	Depreciation		
	3.01 Buildings	$ 13.65	
	3.02 Machinery & Equipment	26.50	
4.	Investment		
	4.01 Buildings	$ 6.83	
	4.02 Machinery & Equipment	12.43	
	4.03 Livestock	50.00	
	4.04 Pasture (Avg. of A & B)	51.36	
TOTAL FIXED COSTS		**$160.77**	
TOTAL OPERATING AND FIXED COSTS		**$451.63**	
5.	Labour	86.40	
TOTAL COST OF PRODUCTION		**$538.03**	

Breakeven Price $/cwt.	
Operating Costs	$ 56.20
Total (without labour)	87.27
Total	103.97

Breakeven Price $/cwt = [illegible]ost ÷ 90% calf crop ÷ 575 lb calf weight

ASSUMPTIONS

1. This budget outlines the cost of production for a cow-calf operation with 100 cows, 3 bulls and 90% calf crop weaned (assumed cow weighs 1,350 lbs).

2. Building and Equipment are valued at new cost with an estimated useful life.

3. All feed is valued at Fair Market Value.

4. Manure removal contracted out.

5. Replacement heifers are valued at fair market value.

6. This budget assumes an average weaning weight of 575 lbs. (steer calves 600 lbs. and heifer calves 550 lbs.)

COW-CALF PRODUCTION COSTS - 1992
WORKSHEET

A. **OPERATING COSTS**				Your Farm
1. **Feed Costs**				
1.01 Grain (including processing)*				
		60	days/year	_____
	x	1.36	kg barley/cow/day (3.0 lbs)	_____
	x	$ 90.00	/tonne ($1.96/bu or 4¢/lb)	_____
	÷	1000	kg/tonne	_____
	=	**$ 7.34**	**/cow**	_____
1.02 Hay				
		3.0	tonnes alfalfa brome hay/cow	_____
	x	$ 30.00	/tonne	_____
	=	**$ 90.00**	**/cow**	_____

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* Barley $68/tonne ($1.48/bu or 3¢/lb)
Processing $22/tonne ($0.48/bu or 1¢/lb)

1.03 Salt and Minerals — **Your Farm**

a) Salt

	16.0	kg/cow/year		
x	$ 0.25	/kg		
=	$ 4.00	/cow	a)	

b) Minerals

	16.0	kg/cow/year		
x	$ 0.72	/kg		
=	$ 11.52	/cow	b)	
=	**$ 15.52**	**/cow**	**(a + b)**	

2. Other Operating Costs:

2.01 Straw

	1.0	tonne/cow/year	
x	$ 15.00	/tonne	
=	**$ 15.00**	**/cow**	

2.02 Veterinary Medicine & Supplies

a) Calf Medication

	$ 0.59	/calf Blackleg (8 way vaccine)		
x	90	% calf crop		
=	$ 0.53	/cow	a)	

b) Cow Medication

	$ 2.34	/cow (IBR, BVD, PI3 + BRSV)		
	3.20	/cow (scour vaccine admin. twice)		
	9.50	/cow (Ivomec - pour on)		
	0.53	/cow (ADE, 2 treatments)		
=	$ 15.57	/cow	b)	

c) Herd Health Program * **Your Farm**

Professional Services:
$ 70.00/hr for 4 visits/year
(assume 1 visit @ 2 hours, include preg check
and 3 visits @ 1 hour = 5 hours total)

	$ 70.00	/hour	
x	5	hours	
÷	100	cows	
=	$ 3.50	/cow	c) _____

d) Mileage *

Assume that herd health charges include mileage;
$0.70/km for an 80 km round trip.

	$ 0.70	/km	_____
x	80	km	_____
x	4	visits	_____
÷	100	cows	_____
=	$ 2.24	/cow	d) _____
	$ 21.84	**/cow**	**(a to d)** _____

2.03 Breeding Costs

ALTERNATIVE - USING A BULL
(Budget uses a bull)

a) Feed For Bulls

	3	tonnes alfalfa brome hay	_____
x	$ 30.00	/tonne	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 2.70	/cow	_____
	3.6	/kg grain/day	_____
x	120	days	_____
x	$ 0.09	/kg	_____
x	3	bulls	_____
÷	100	cows	_____
	$ 1.17	/cow	_____
=	$ 3.87	/cow	a) _____

* **NOTE:** Pregnancy testing could be charged on a per cow basis rather than an hourly rate, eg. $3.25 per cow. The rates above are maximum rates charged.

b) Straw for Bulls

			Your Farm
	0.5	tonnes/bull	_____
x	$ 15.00	/tonne	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 0.23	/cow	b) _____

c) Vet & Medicine for Bulls *

	$ 17.50	/bull (Complete exam)	_____
+	53.00	(Semen test)	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 2.12	/cow	c) _____

d) Replacement of Bulls

	$ 2,000	/bull; original cost	_____
-	1,400	/bull; salvage value	_____
÷	4	years of service	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 4.50	/cow	d) _____

e) Investment in Bulls

$$\frac{\text{Original Cost + Salvage Value}}{2} \times \text{Interest Rate}$$

	$ 2,000	/bull, original cost	_____
+	1,400	/bull; salvage value	_____
÷	2		_____
x	5	% interest on investment	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 2.55	/cow	e) _____

* These are maximum rates charged.

f) Buildings & Pasture Costs for Bulls — Your Farm

Assume the same pasture cost that P.F.R.A. charges for 1 cow without a calf

	$ 42	Pasture Cost	_____
x	3	bulls	_____
÷	100	cows	_____
=	$ 1.26	/cow	_____
	$ 14.53	**/cow**	**(a to f)** _____

OTHER BREEDING ALTERNATIVES

a) Artificial Insemination - may be another option; $10 to $20 per cow or heifer _____

b) P.F.R.A. Community Pasture - breeding fees of $30 per cow or heifer _____

2.04 Fuel, Maintenance & Repairs

a) Machinery

	$500.00	fuel cost	_____
+	500.00	maintenance & repairs	_____
÷	100	cows	_____
=	$ 10.00	/cow	a) _____

b) Buildings, Yard Fences and Waters

	$750.00		_____
÷	100	cows	_____
=	$ 7.50		b) _____
=	**$ 17.50**	**/cow**	**(a + b)** _____

2.05 Utilities

	$700.00	total cost	_____
÷	100	cows	_____
=	**$ 7.00**	**/cow**	_____

2.06 Marketing & Transportation

Your Farm

a) Trucking

Calves

	90	calves		
x	575	lbs/calf		
x	$ 1.25	/cwt (trucking cost)		
÷	100	cows		
=	$ 6.47	/cow	a)	

Cull Cows

	15	cull cows (15%)		
	1	cow died		
x	1,350	lbs/cow		
x	$ 1.25	/cwt (trucking cost)		
÷	100	cows		
=	$ 2.36	/cow	b)	

b) Selling Commission

Calves

	90	calves		
x	$ 10.00	/calf		
÷	100	cows		
=	$ 9.00	/cow	c)	

	15	cull cows		
	1	cow died		
x	1,350	lbs/cow		
x	$ 50.00	/cwt, selling value		
x	1.5	% commission on sales		
÷	100	cows		
=	$ 1.42	/cow	d)	
=	**$ 19.25**	**/cow**	**(a to d)**	

2.07 Death Loss

	100	cows		
x	1	% death loss		
x	$ 1,000	/cow		
÷	100	cows		
=	**$ 10.00**	**/cow**		

2.08 Manure Removal — Your Farm

Budget assumed a custom charge of $1,500. It was estimated that it would take two men with a crawler and one truck two days to clean the lots and pole barns. (*No Value on manure.*)

	$ 1,500	annual cost for removal	
÷	100	cows	
=	**$ 15.00**	**/cow**	

2.09 Insurance Cost

	$27,300	building & water system	
x	0.60	cost/$100 capital	
+	$ 30.00	liability insurance	
÷	100	cows	
=	**$ 1.94**	**/cow**	

2.10 Herd Replacement (15% culled)

	$ 900.00	/replacement bred heifer	
-	675.00	/cull cow	
x	15	% replacement rate	
=	**$ 33.75**	**/cow**	

2.11 Miscellaneous

(Includes expenses relating to farm records, administration, office supplies & telephone.)

	$ 500.00	total cost	
÷	100	cows	
=	**$ 5.00**	**/cow**	

2.12 Cow Calf Stabilization Premium

$ 6.00 **/cow**

2.13 Operating Interest

(Operating interest is charged on one half of the subtotal operating costs.)

	$ 279.67	Subtotal operating costs	
÷	2		
x	8	% operating interest rate	
=	**$ 11.19**	**/cow**	

CAPITAL COSTS		Your Farm
Buildings & Water System:		
Windbreak fence (283 ft. x $7/ft.)	$ 1,988	
Feedlot Fence (792 ft. x $2/ft.)	1,584	
Calf Shelters (2 x 16' x 32' x $4/ft²)	4,096	
Handling Facility	3,500	
Calving Barn (30' x 32' x $10/ft²)	9,600	
Waterers 2 @ $1,000	2,000	
Gates 6 @ (12' x $6/ft)	432	
Round Bale Feeders 4 @ $150	600	
Well and Pressure System (trenching)	3,500	
	$ 27,300	
Machinery & Equipment:		
Tractor & Loader	$ 65,000	
Miscellaneous	6,000	

B. FIXED COSTS

3. Depreciation:

$$\frac{\textit{Original Cost - Salvage Value}}{\textit{Useful Life}}$$

3.01 Buildings & Water System

	$27,300	Original Value	
-	0	Salvage Value	
÷	20	years useful life	
÷	100	cows	
=	**$13.65**	/cow	

3.02 Machinery & Equipment

a) Tractor & Loader

	$65,000	Original Value	
-	20,000	Salvage Value	
÷	10	years useful life	
÷	100	cows	
x	50	% usage in cow-calf	
=	$ 22.50	/cow	a)

b) Miscellaneous Equipment — **Your Farm**

	$ 6,000	original cost	
-	1,200	salvage value	
÷	12	years useful life	
÷	100	cows	
=	$ 4.00	/cow	b)
=	**$ 26.50**	**/cow**	

4. Investment

$$\frac{\textit{Original Cost} + \textit{Salvage Value}}{2} \times \textit{Investment Rate}$$

4.01 Buildings & Water System

	$27,300	Original Value	
+	0	Salvage Value	
÷	2		
x	5	% investment interest rate	
÷	100	cows	
=	**$ 6.83**	**/cow**	

4.02 Machinery & Equipment

a) Tractor & Loader

	$65,000	Original Value	
+	20,000	Salvage Value	
÷	2		
x	5	% investment interest rate	
÷	100	cows	
x	50	% usage in cow-calf	
=	$10.63	/cow	a)

b) Miscellaneous Equipment

	$ 6,000	original cost	
+	1,200	salvage value	
÷	2		
x	5	% interest	
÷	100	cows	
=	$ 1.80	/cow	b)
=	**$ 12.43**	**/cow**	

4.03 Livestock **Your Farm**

	$ 1,000	/cow	_____
x	5	% investment rate	_____
=	**$ 50**	**/cow**	_____

4.04 Pasture Costs

Budget examined four different pasture programs with varying land values and carrying capacities. Choose the one that applies to your farm. Cattle were pastured for 140 days. Budget uses a combination of alternatives A and B.

A. **MARGINAL LAND:** Land values at $247/hectare ($100/acre) with carrying capacity of 3.2 hectares (7.9 acres) per cow. Property taxes are $1/hectare ($0.40/acre).

a) Land Investment Cost:

	3.2	hectares/cow	_____
x	$247.00	/hectare	_____
x	5	% investment rate	_____
=	$ 39.52	/cow	a) _____

b) Taxes

	$ 1.00	/hectare	_____
x	3.2	hectares/cow	_____
=	$ 3.20	/cow	b) _____
	$ 42.72	**/cow**	**(a + b)** _____

B. **CROP LAND:** Land valued at $800 per hectare ($325/acre) with a carrying capacity of 1.2 hectares (3 acres) per cow. Property taxes are $10/hectare ($4.05/acre).

a) Land Investment Cost:

	1.2	hectares/cow	_____
x	$800.00	/hectare	_____
x	5	% investment rate	_____
=	$ 48.00	/cow	a) _____

b) Taxes

	$ 10.00	/hectare	_____
x	1.2	hectares/cow	_____
=	$ 12.00	/cow	b) _____
	$ 60.00	**/cow**	**(a + b)** _____

Your Farm

C. **CROWN LAND:** Crown land pasture cost is based on crown rental rate of $180/quarter which includes property tax. Carrying capacity is estimated at 10 cows per quarter. Fence cost at $1,200/quarter x 10 quarters - $12,000.

a) Depreciation on fence

	$ 12,000	fence cost	
-	2000	salvage value	
÷	20	useful life	
÷	100	cows	
=	$ 5.00	/cow	a)

b) Fence Investment Cost:

	$ 12,000	fence cost	
+	2000	salvage value	
÷	2		
x	5	% investment rate	
÷	100	cows	
=	$ 3.50	/cow	b)

c) Land Rental (includes taxes)

	100	cows	
÷	10	cows/quarter	
=	10	quarters	
x	$ 180	/quarter, rental rate	
=	$1,800		
÷	100	cows	
=	$18.00	/cow/year	c)
=	**$26.50**	**/cow**	**(a + b + c)**

1 quarter section = 65 hectares = 160 acres

D. **P.F.R.A.:** Community pasture grazing fee is estimated at $0.30/cow/day plus $10/calf/season.
Season is 140 days.

Your Farm

a) Cows

	$ 0.30	/cow/day		_____
x	140	days		_____
=	$ 42.00	/cow	a)	_____

b) Calves

	100	cows		_____
x	90	% calf crop		_____
=	90	calves		_____
x	$ 10	/calf/season		_____
÷	100	cows		_____
=	$ 9.00	/cow/year	b)	_____
	$ 51.00	**/cow**	**(a + b)**	_____

5. **Labour** (includes winter feeding period, inspecting, calving and maintenance and repair labour to fences and buildings)

	9	hours/cow/year	_____
x	$ 9.60	/hour	_____
=	**$ 86.40**	**/cow**	_____

FOR MORE INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE

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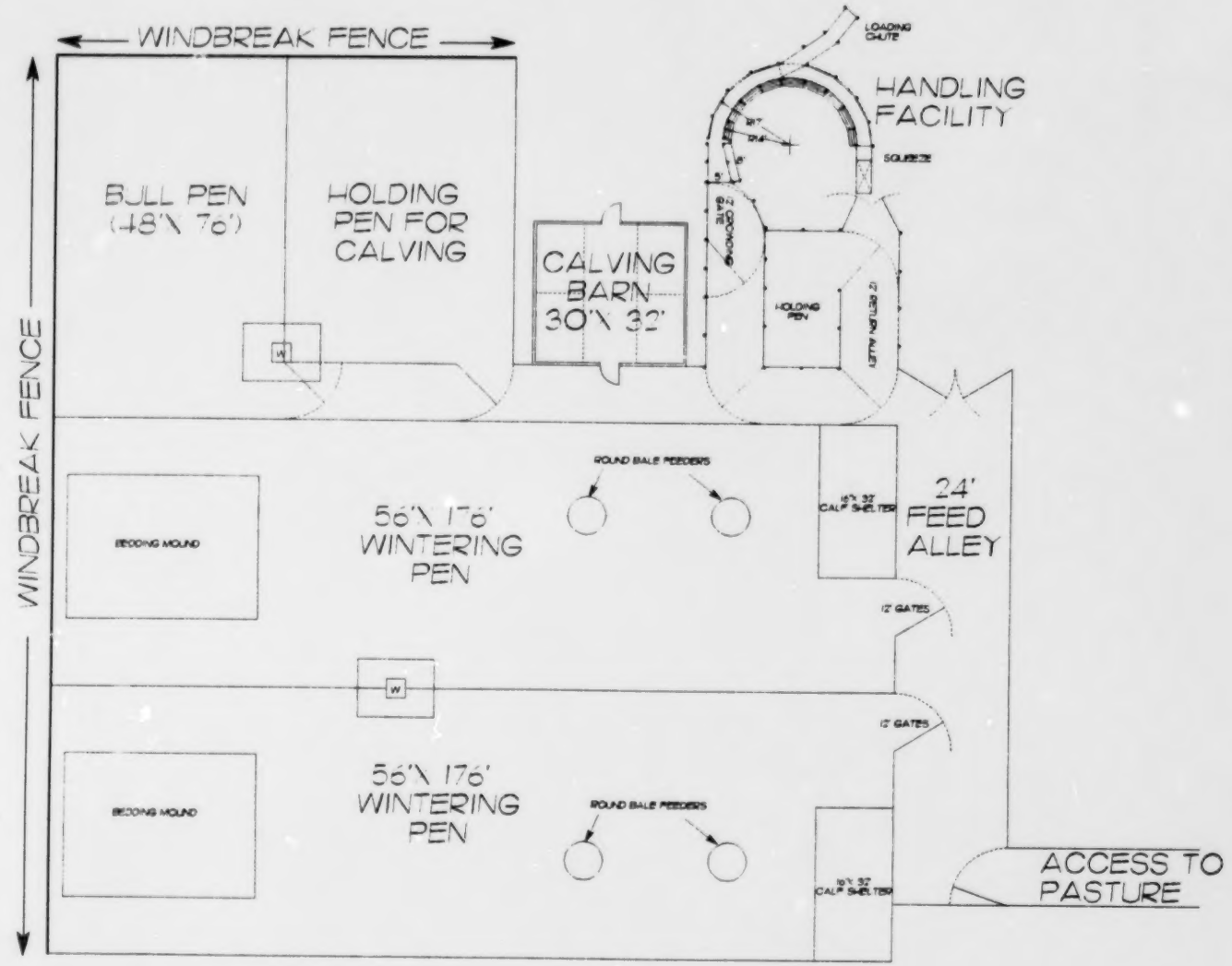

Manitoba Agriculture Engineering

100 COW WINTERING/ CALVING FACILITY

3/32" = 1'

AUG. 1982

PLAN #01914